## **REMARKS**

In response to the Office Action mailed April 8, 2004, Applicants amend their application and request reconsideration. Claim 14 is cancelled leaving claims 15-18 pending.

Claim 18 is amended to eliminate redundant language in the preamble.

Applicants express appreciation for the courtesy of an interview granted to their representatives on May 12, 2004. The issue discussed below was discussed at the interview, but no agreement was reached.

In this Amendment the word "physical" is added to each of the two remaining independent claims, claims 15 and 17. That adjective "physical" modifies the word "contact". However, Applicants believe that no such additional amendment is needed to distinguish from the prior art or to explain further the meaning of the claims, based upon the claims previously presented and described in the remarks of the Amendment filed January 8, 2004.

The subject matter of this patent application has been repeatedly discussed. The invention is directed to a vaporizing device and a chemical vapor deposition apparatus. Many of the elements of the two remaining independent claims, claims 15 and 17, are similar. Among those elements is a cooling block, described as "in contact with and surrounding the spray nozzle for *conducting* heat from and cooling the spray nozzle".

Claims 15 and 17 were rejected as unpatentable over Li et al. (U.S. Patent 5,835,677, hereinafter Li) in view of Zhao et al. (U.S. Patent 6,210,458, hereinafter Zhao). This rejection is again respectfully traversed.

In the Office Action of April 8, 2004, the Examiner replied, at page 5, to the Applicants' argument that "that the cooling jacket 26 of Li is not in direct contact with Li's nozzle 24. It is noted, however that claims 15 and 17 do not recite that the cooling block is in direct physical contact as argued by applicants." The Examiner continued that the cooling jacket of Li is in *thermal* contact with the nozzle because of radiative cooling. It is Applicants' view that the Examiner has made an overly broad interpretation of the cited claim language and has not given full credit to all of the claim language. An unnecessary amendment is proposed here to overcome the rejection. If the Examiner now agrees that this additional amendment is unnecessary to allowance of the remaining claims, Applicants will withdraw the amendment to claims 15 and 17, while still canceling claim 14, in order to place the application in form for allowance.

The Examiner's interpretation of the cited claim language is inappropriate because of the claim language itself. The passage in each of claims 15 and 17 of interest provides

"a cooling block in contact with and surrounding the spray nozzle for **conducting** heat from and cooling the spray nozzle". Insufficient attention was given to the word "conducting" in the rejection of claims 15-18. The Examiner took the expansive view that radiative cooling in Li would meet the limitation of the claims. However, it is apparent that the radiative cooling in Li cannot meet the limitations of the claims.

It is almost too fundamental to state that, according to conventional thermodynamics, heat can be transferred from one location to another location by three difference mechanisms: conduction, convection, and radiation. The art recognizes the very different mechanisms involved in each of these three heat transfer processes by giving them different names. Applicants relied upon that fundamental knowledge in the language of the rejected claims by specifying not only contact between the cooling block and the spray nozzle but also explaining that the contact conducts heat. The standard teaching in the thermodynamic arts is that heat transfer by conduction occurs because of direct physical contact between two bodies, one body being warmer than the other and transferring heat to the cooler body. Considering all of this claim language, it clearly was error to apply Li as applied in the rejection, for the proposition that Li teaches a "similar" heat transfer arrangement, when Li, as admitted in the Office Action, only provides for radiative transfer between a putative cooling block and nozzle, not for heat conduction. On that basis, upon reconsideration, the rejection should be withdrawn and the remaining four claims allowed.

At the interview, Applicants' representative presented a dictionary definition of the word "contact", a copy of which is attached. This dictionary definition is taken from "The American Heritage Dictionary" (1976). The primary definition of the word "contact" is "The coming together or touching of two objects or surfaces." The language of the two independent claims, claims 15 and 17, regarding the "contact" between the cooling block and the spray nozzle should have been given the principal meaning of that word, i.e., physical contact, since there was no special meaning attributed to that word. If Applicants had intended to qualify the term "contact", i.e., to give that word a meaning different from its ordinary meaning, then it would have been incumbent upon the Applicants to use a different term or to provide an explanation of the special meaning. In other words, if Applicants had intended the word "contact" to be interpreted to mean "thermal contact", possibly excluding physical contact, then the Applicants would have to have modified the claim language. Since there was no such modification, the term "contact" should have been given its ordinary meaning in interpreting the scope of claims 15 and 17. When the Examiner interpreted "contact" to mean "thermal" contact, the proper rules of claim interpretation were not followed.

Further, defining any two physical elements as being "in thermal contact" is not structurally limiting. In the broadest thermodynamic sense, every element of the universe is in thermal contact, i.e., thermal exchange, with every other element in the universe. The amount of heat transfer may be miniscule between any two such elements, for example, between the earth and a remote star, but some transfer can be inferred if light is received from the star. However, there is no meaningful energy transfer of any kind. Thus, "thermal" contact has no meaning and does not describe the true relationship of the earth and star. This kind of limitless interpretation has been placed on the cited claim language, and is clearly contrary to the Applicants' intention and the disclosure. The claim interpretation is erroneous and, upon reconsideration, the rejection based on this interpretation should be withdrawn.

Finally, in this Amendment the word "physical" is added to claim 15 to describe the contact between the cooling block and the nozzle. This word is chosen based upon the comment in the Office Action. As already stated, the addition of this word is redundant and unnecessary in the claims because of the description of heat *conduction* between the cooling block and the spray nozzle. Nevertheless, this Amendment is proposed based upon the discussion at the interview and the Office Action. Because of the redundancy of this proposed Amendment, the Amendment is clearly non-substantive and therefore cannot raise any new issues. Further, to repeat, if claims 15-18 will be allowed without the amendment of claims 15 and 17, Applicants will withdraw the proposed amendment of claims 15 and 17.

Claims 15-18 were also rejected for obviousness-type double patenting in view of U.S. Patent 6,273,957. In order to eliminate further issues in the prosecution of this patent application and to expedite allowance, Applicants now supply a Terminal Disclaimer and the requisite fee, overcoming the double patenting rejection.

Reconsideration, entry of the foregoing amendment, at least with respect to the cancellation of claim 14 and the entry of the Terminal Disclaimer, to place the application

In re Appln. of MATSUNO et al. Application No. 09/899,183

in form for allowance, and allowance of claims 15-18, as previously pending or as amended here, are earnestly solicited.

Respectfully submitted,

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314

adj.

(kön'stər-nāt') ir.v. -nat-ed, -nat-ing, -nat-ing, ternation in. [Lat. consternare, consternat.:) + sternere, to throw down.]

in (kön'stər-nā'shən) n. Sudden confusion or

in (kön'stər-nā'shən) n. Sudden confusion or (kön'stər-nā'shən) n. Sudden confusion or (ön'stər-nā') tr.v. -pat-ed. -pat-ing. -patea. To tion in. [Lat. constipare. constipar. to crowd. - together + stipare, to cram.] (kön'stə-pā'shən) n. Difficult, incomplete or cuation of the bowels. y (kən-stich'öb-ən-sè) n., pl. -cles. 1. a. The represented by an elected legislator or exceptistrict represented. 2. A group of suppontant (kən-stich'öb-ən-sè) n., pl. -cles. 1. a. The represented by an elected legislator or exceptistrict represented. 2. A group of suppontant to make or amend a constitution. - the authorizes another to represent him; che ber of a group represented by an elected official tituent part; component. 4. Gram. One of two ents into which a construction or compound by analysis, being either immediate, as Her vailroad, or ultimate, as Her work/st ont between the constituents, constituents, constituents, on such as a sentence.

Lonstitutes, constituents, of a grammation, such as a sentence.

Lonstitute a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue a quorum. 2. To set up; enact (a law, low titue) ena

n (kön'sti-tōo'shən, -tyōo'-) n. 1. The act or imposing, setting up, or establishing. 2. a. The or structure of something; make-up. b. The te-up of a person: a man with a strong constitution of fundamental laws and principle es the nature, functions, and limits of a govern: institution. b. The document on which such a porded.

neal (kon'sti-too'sho-nol, -tyoo'-) adj. 1.0f a mai (kôn'sti-too'sna-nai, -tyoo') and i. Uf o a constitution: a constitution an endment t with or permissible according to a constitution to the constitution acceding from the basic structure or nature of a hing; essential: a constitutional inability to up 4 walk taken regularly for one's health.—ooi.

A walk taken regularly for one's health.—oor.

T-ty (-nāl'ī-te), n.—con'sti-tu'tion-al-ty adv.

n-al-ism (kôn'sti-too'sha-na-līz'am, -tyoo') i
ient in which power is distributed and limited laws that must be obeyed by the rulers. 2. Advastitutionalism.—con'sti-tu'tion-al-tat n.

tal monarchy n. A monarchy in which the ruler are restricted to those granted under the 1 and laws of the nation.

\*\*Rom'sti-too'tiv -tyoo'-) adi. 1. Makint 1

ne ruler are restricted to inose grainted unad as and laws of the nation.

ve (kön'sti-töö'tiv, -työö'-) adj. 1. Making i it is; essential. 2. Having power to institute, enact. —con'sti-tu'tive-ly adv.

ve enzyme (kön'sti-töö'tiv, -työö'-, kan-siddin enzyme produced by a cell regardless of the its substrate.

(kan-strain') (r.v. -strained, -strain-ing, -strain-pel by physical, moral, or circumstantial force, constrained to object. 2. To keep within destantine. 3. To check the freedom or mobility of. To compel or produce in a forced or srifting constrained smile. [Me constreiner < Lat. or or estrain, compress: com-, together + straget —con-strain's-ble adj. —con-strain'ed'y (stif. —con-strain'ed') (stif. —con-strain'ed').

-con-strain's the adj. -con-strain conf.

(kan-strain's n. 1. The threat or use of force is strict, or dictate the action or thought of other te, quality, or sense of being restricted to a give action or inaction. 3. Something that resine regulates. 4. A lack of ease; embarrassed resine: "All constraint had vanished between he me tegan to talk" (Edith Wharton). [ME constraint instraindre < Lat. constringere, to restrain.—se

(k) (k) strickt') v. stricted, stricting, stricts ce smaller or narrower, as by shrinking or os. To squeeze or compress by or as if by narrowing. —intr. To become constricted. (Lat. compress. —see CONSTRAIN.) —correction. (to compress. —see CONSTRAIN.) —correction. (to strick short) n. 1. a. The act or process of ng. b. The condition of being constricting that constricts.

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consus-tude (kôn'swi-tood', -tyood') n. Custom; usage.

[ME < Lat. consustido. —see CUSTOM.] —con'aue-tu'di-nar-y (-tood'n-àr'è, -tyood')-à adj.

consul (kôn'sal) n. 1. Either of the two chief magistrates of the Roman Republic, elected for a term of one year. 2. Any of the three chief magistrates of the French Republic from 1799 to 1804. 3. An official appointed by a government to reside in a foreign city and represent his government's commercial interests and give assistance to its citizens there. —See Usage note at council. [ME consulat < Lat. consulatus < consul.] —con'eu-lar (-sə-lər) adj.

consul-consul.] —con'eu-lar (-sə-lər) adj.

consul-consul.] —con'eu-lar (-sə-lər) adj.

a. The office or term of office of a consul. 2. The premises occupied by a consul. [ME consular < Lat. consulatus < consulations of the consulation of the consulation

2. Anal. A music that contracts of compresses a part or organ of the body. A Any of various snakes, such as a python or boa, that coil around and crush their prey, thon or boa, that coil around and crush their prey. To cause to contract; constrict. [Lat. constringer, estingent and compress. —see CONSTRAIN.] —constringency n. —constringent add, satingent add, satingent add. 2. To create (a sentince, for example) by systematically arranging ideas or expressions. 3. Math. To draw (a geometric figure) that meets pressions. 3. Math. To draw (a geometric figure) that meets pressions. 3. Math. To draw (a geometric figure) that meets pressions. 3. Math. To draw (a geometric figure) that meets pressions, a concept, that is synthesized or constructed from simple elements. [Lat. construere, construct: com-, together + unere, to pile up.] —con-struct'ble adj. —con-struct'or, construct'en (kan-striik'shan) n. 1. a. The content of the construct'en n.

invere, to pile up.]—con-struct'l-ble adj.—con-struc'tor, con-struc-tion (kon-strük'shən) n. 1. a. The act or process of constructing. b. The condition of being constructed. The business or work of building. 2. Something that is constructed; a structure or building. 3. The way in which something is put together: a shelter of simple construction. 4. The interpretation or explanation given an expression or statement. 5. Gram. a. The arrangement of words to form a meaningful phrase, clause, or sentence. b. A group of words so arranged.—con-struction-al-dj.—con-struction-al-dj.

adv. construction ist (kon-strük'sho-nīst) n. A person who constructs a legal text or document in a specified way. constructive (kon-strük'tiv) adj. 1. Serving to advance a good purpose; helpful. 2. Of or pertaining to construction; structural. 3. Law. Based on an interpretation; not directly expressed.—con-structive-lya adv.—con-structive-ness n. con-structivism (kon-strük'ta-viz'sm) n. A movement in modern art in which glass, sheet metal, and other industrial enterials are used to create nonrepresentational often con-

constructivism (kon-struktio-viz'sm) n. A movement in modern art in which glass, sheet metal, and other industrial materials are used to create nonrepresentational, often geometric objects. —constructivist n. construe (kon-strod) v. -strued, -struing, -strues. —tr. 1. Gram. a. To analyze the structure of (a clause or sentence), b. To use syntactically: The noin "fish" can be construed as singular or plural. 2. To place a certain meaning on; interpret. 3. To translate, esp. aloud. —intr. To analyze grammatical structure. —n. (kon'strod). An interpretation or translation. [ME construen < LLat. construere < Lat., to build. —see construct.]
consub-stan-dial (kōn'səb-stān'shəl) adj. Having the same substance, nature, or essence. [ME consubstancials; Luat. computationals: Lat. computationals: Lat. substantials; substantial < Lat. substantia, substantial < Lat. substantials; substantial, satub-stantial vitate (kōn'səb-stān'shō-āt') tr. & intr. v. -at-ed, -at-ing, -at-ea. To unite or become united in one common substance, nature, or essence.
con-sub-stan-ti-at-tion (kōn'səb-stăn'shō-āt') tr. & intr. v. -at-ed, -at-ing, -at-ea. To unite or become united in one common substance, nature, or essence.
con-sub-stan-ti-at-tion (kōn'səb-stăn'shō-āt') tr. & intr. v. -at-ed, -at-ing, -at-ea. To unite or become united in one common substance, nature, or essence.

nd consul; consul general n, pl. consuls general. A consular officer of the highest rank.

consult (kan-sult') v. -sult-ed, -sult-ing, -sults. —tr. 1. a. To test to: consult a directory. 2. To have an eye to; consider: consult one's bankbook before making a major purchase.

-intr. 1. To exchange views; confer. 2. To give expert advice as a professional. —n. (kan-sult', kŏn'sult'). A consultation. [lat. consultare, freq. of consulere, to take counsel.] consult-ant (kon-sult'snn) n. 1. A person who gives expert or professional advice. 2. A person who consults another. consultant (kon-sul-id'shan) n. 1. The act or procedure of consulting. 2. A conference at which advice is given or when are exchanged.

con-sult-at-tive (kon-sul'to-tiv) also con-sul-ta-to-ry (-tôr'ē

view are exchanged.

consultative (kon-sül'to-tiv) also con-sultato-ry (-tôr'e, -tôr'e) ad. Of or pertaining to consultation; advisory.

consume (kon-scom') v. -sumed, -sum-ing, -sumes. -tr.

1. To eat or drink up; ingest. 2. To expend (fuel, for example), us up. 3. To waste; squander. 4. To destroy totally, as by fire; level. 5. To absorb; engross: consumed with interest.

-tar. To be destroyed, expended, or wasted. [ME consumer < Lat. consumer : com- (intensive) + sumere, to take] —con-sum'a-bie adj. & n.

con-sum-ed-ly (kon-sco'mid-le) adv. To an excessive degree.

con-sum-er (kən-sōo'mər) n. 1. One that consumes. 2. One who acquires goods or services; buyer. 3. A heterotrophic organism in a food chain that ingests other organisms or organic matter. —con-sum'er-ship' n. consumer credit n. Credit granted to a consumer, permitting him to own or use goods while he is making payments on them.

ting him to own or use goods while he is making payments on them.

consumer goods pl.n. Goods, such as food and clothing, that satisfy human wants through their consumption or use. con-sum-er-lsm (kan-sōō'mə-rīz'sm) n. 1. The movement seeking to protect the rights of consumers by requiring such practices as honest packaging, labeling, and advertising, fair pricing, and improved safety standards. 2. The theory that a progressively greater consumption of goods is economically beneficial.—con-sum'er-lat n.

consumer price index n. An index of prices used to measure the change in the cost of basic goods and services in comparison with a fixed base period.

con-sum-mate (kōn'sa-māt') tr.n. -mated. -mat-ing, -mates.

1. To bring to completion, perfection, or fulfillment; conclude: consummate a business transaction. 2. To fulfill (a marriage) with the first act of sexual intercourse after the ceremony.—adj. (kon-sūm'īt). 1. Complete or perfect in every respect: consummate hoppiness. 2. Supremely accomplished or skilled: a consummate artist. 3. Complete; utter: a consummate bore. [ME consummaten — Lat. consummare: com-together + summa, sum.]—con-sum'mately adv.—con'sum-ma'tor (kōn'sa-mā'stiv).

con-sum-ma'tue (kōn'sa-mā'stīv).

con-sum-ma'tue (kōn'sa-mā'stīv).

1. The act of con-con-sum-ma-tor (kōn'sa-mā'stīv).

con'sum-ma'tive (kôn'sə-mā'tiv), con'sum'ma-to'ry (kon-sum'-cho're, -tôr'e) adj.—con'sum-ma'tor (kôn'sə-mā'tir) n.

con-sum-ma-tion (kôn'sə-mā'shən) n. 1. The act of consummating; fulfillment. 2. An ultimate end or goal.

con-sump-tion (kon-sümp'shən) n. 1. a. The act or process of consuming, b. The state of being consumed. C. An amount consumed. 2. Econ. The using up of consumer goods and services. 3. Pathol. a. A wasting of tissue. b. Tuberculosis (sense 2). [Lat. consumptio, a consuming < consumptive; p.part. of consumere, to consume.]

con-sump-tive (kon-sümp'itiv) adj. 1. Tending to consume. 2. Of, pertaining to, or afflicted with consumption.—n. A person afflicted with consumption.—con-sump'tive-ty adv. con-tact (kôn'tākt') n. 1. The coming together or touching of two objects or surfaces. 2. The state of being in communication: in contact with the right people. 3. A person who might be of use; connection. 4. Elect. a. A connection between two conductors that permits a flow of current. b. A part or device that makes or breaks such a connection. 5. Med. A person recently exposed to a contagious disease. 6. Informal. A contact lens.—v. (kôn'tākt', kon-tākt') -tact-do,-tact-ing, tacts.—rt. 1. To bring or put in contact. 2. Informal. To get in touch with; communicate with.—intr. To be in or come into contact.—adj. (kôn'tākt'). 1. Of, sustaining, or making contact. 2. Caused or transmitted by touching: a contact skin rash. [Lat. contactus < p.part. of contingere, to touch. com, together + tangere, to touch.]—con-tactusal (kon-tāk'chōo-al) adj.—con-tactusal-tyadv.

Usage: Contact (verb), meaning "to get in touch with," is widely used but is still considered inappropriate to formal use by a majority of the Usage Panel. Contact furbilish n. An acute skin inflammation caused by contact with an irritating substance, such as a chemical contact flight also contact flying n. Aircraft navigation by visual reference to the horizon or to landmarks. contact lens n. A thin corrective lens fitted over the cornea of the eye.

contact lens n. A thin corrective lens fitted over the cornea of the eye.

contact print n. A print made by exposing a photosensitive surface in direct contact with a photographic negative.

contact glon (kon-tă'jon) n. 1. a. Disease transmission by direct or indirect contact. b. A disease that is or may be so transmitted. c. A contagium. 2. A harmful or corrupting influence. 3. The tendency to spread, as of an influence or emotional state. [ME contagion < Lat. contagio < contingere, to touch. —see CONTACT.]

contagious (kon-tă'jos) adţ. 1. Transmissible by direct or indirect contact. 2. Carrying or capable of carrying disease.

3. Spreading or tending to spread from one to another; catching. —contagious-ty adv. —contagious-ness n. contagious abortion n. Brucellosis (sense 2).

contagious abortion n. Brucellosis (sense 2).

contagilum (kon-tâ'jom) n. pl. -gla (-jo). The direct cause, as a virus, of an infectious disease. [Lat., contagion < contagio.]

gio.]
con-taln (kən-tān') tr.v. -talned, -taln-ing, -talns. 1. To have within; enclose. 2. To have as component parts; comprise; include. 3. To be able to hold; have capacity for. 4. Math. To be exactly divisible by. 5. To hold or keep within certain limits; restrain: contain one's emotions. 6. To restrict the strategic power of (a nation or bloc), as by encircling it with hostile alliances. [ME conteiner < OFr. contenir < Lat. continer : com., together + tener, to hold.]—con-taln'a-ble adj.—con-taln'ment n.

adj. —con-tain'ment n.

Synonyms: contain, hold, accommodate. These verbs
mean to have within or to have capacity for. Contain refers

ppop/r roar/s sauce/sh ship, dish/t tight/th thin, path/th this, bathe/ü cut/ûr urge/v valve/w with/y yes/z zebra, size/thision/s about, item, edible, gallop, circus/ce Fr. feu, Ger. schön/ü Fr. tu, Ger. über/KH Ger. ich, Scot. loch/N Fr. bon.



contact lens

ife / g gag / h hat / hw which / I pit / I pie / it pier :/ô paw, for/oi noise/ou out/oo took/ob book/